



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1182802  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

|                                   |                 |   |
|-----------------------------------|-----------------|---|
| Spud Date or<br>Recompletion Date | Date Reached TD | Completion Date or<br>Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1182802

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

|  |   |
|--|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(Attach Additional Sheets)</i><br><br>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample<br><br>Name Top Datum |
|--|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used  |                   |                           |                   |               |                |              |                            |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. |                   |                           |                   |               |                |              |                            |
| Purpose of String   | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |

| ADDITIONAL CEMENTING / SQUEEZE RECORD  |                  |                |              |                            |
|--|------------------|----------------|--------------|----------------------------|
| Purpose:   | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| <input type="checkbox"/> Perforate<br><input type="checkbox"/> Protect Casing<br><input type="checkbox"/> Plug Back TD<br><input type="checkbox"/> Plug Off Zone |                  |                |              |                            |
|  |                  |                |              |                            |

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br><i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
|                                   |           |         |             |               |         |

|  |   |   |
|--|---|---|
| <b>DISPOSITION OF GAS:</b><br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br><i>(If vented, Submit ACO-18.)</i> | <b>METHOD OF COMPLETION:</b><br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled<br><i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____<br><input type="checkbox"/> Other <i>(Specify)</i> _____ | <b>PRODUCTION INTERVAL:</b><br>_____<br>_____ |
|--|---|---|

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Downing-Nelson Oil Co Inc |
| Well Name | Ganoung Charolais A 1-7   |
| Doc ID    | 1182802                   |

All Electric Logs Run

|                            |
|----------------------------|
|                            |
| Micro                      |
| Sonic                      |
| Dual Induction             |
| Compensated Denity/Neutron |

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Downing-Nelson Oil Co Inc |
| Well Name | Ganoung Charolais A 1-7   |
| Doc ID    | 1182802                   |

Tops

| Name           | Top   | Datum |
|----------------|-------|-------|
| Top Anhydrite  | 1140' | +807  |
| Base Anhydrite | 1175' | +772  |
| Topeka         | 2840' | -893  |
| Heebner        | 3070' | -1123 |
| Toronto        | 3088' | -1141 |
| LKC            | 3110' | -1163 |
| BKC            | 3352' | -1405 |
| Arbuckle       | 3484' | -1537 |

|           |                           |
|-----------|---------------------------|
| Form      | ACO1 - Well Completion    |
| Operator  | Downing-Nelson Oil Co Inc |
| Well Name | Ganoung Charolais A 1-7   |
| Doc ID    | 1182802                   |

Perforations

| Shots Per Foot | Perforation Record | Material Record              | Depth       |
|----------------|--------------------|------------------------------|-------------|
| 3              | 3151'-3214'        | 1000 Gallons 15%<br>Mud Acid | 3151'-3214' |
| 4              | 3210'-3216'        | 250 Gallons 20% Mud<br>Acid  | 3088'-3092' |
| 4              | 3190'-3192         | 500 Gallons 20% NE<br>Acid   | 3088'-3092' |
| 4              | 3165'-3168'        |                              |             |
| 4              | 3148'-3152'        |                              |             |
| 4              | 3088'-3092'        |                              |             |

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7001

|         |      |      |       |        |       |             |         |
|---------|------|------|-------|--------|-------|-------------|---------|
| Date    | Sec. | Twp. | Range | County | State | On Location | Finish  |
| 11-3-13 | 7    | 10   | 16    | Rooks  | KS    |             | 2:15 AM |

Location Planville E to 25 Rd 1/2 S 1/2 E

|                                |                            |  |
|--------------------------------|----------------------------|--|
| Lease <u>Ganong</u>            | Well No. <u>1-7</u>        | Owner  |
| Contractor <u>Discovery #1</u> |                            | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |
| Type Job <u>Surface</u>        |                            | Charge To <u>Downing Nelson</u>  |
| Hole Size <u>12 1/4</u>        | T.D. <u>688'</u>           | Street   |
| Csg. <u>8 5/8</u>              | Depth <u>688'</u>          | City   |
| Tbg. Size                      | Depth                      | State  |
| Tool                           | Depth                      | The above was done to satisfaction and supervision of owner agent or contractor.   |
| Cement Left in Csg. <u>30'</u> | Shoe Joint                 | Cement Amount Ordered <u>275 com 3% cc 2% oil</u>  |
| Meas Line                      | Displace <u>41 3/4 bbl</u> |  |

**EQUIPMENT**

|                       |                     |                   |
|-----------------------|---------------------|-------------------|
| Pumptrk <u>15</u> No. | Cementer            | Common <u>275</u> |
|                       | Helper <u>Matt</u>  | Poz. Mix          |
| Bulktrk <u>9</u> No.  | Driver              | Gel. <u>6</u>     |
|                       | Driver <u>Chad</u>  | Calcium <u>10</u> |
| Bulktrk <u>Pu</u> No. | Driver              |                   |
|                       | Driver <u>Brett</u> |                   |

**JOB SERVICES & REMARKS**

|                    |                                    |
|--------------------|------------------------------------|
| Remarks:           | Hulls                              |
| Rat Hole           | Salt                               |
| Mouse Hole         | Flowseal                           |
| Centralizers       | Kol-Seal                           |
| Baskets            | Mud CLR 48                         |
| D/V or Port Collar | CFL-117 or CD110 CAF 38            |
|                    | Sand                               |
|                    | Handling <u>291</u>                |
|                    | Mileage <u>8 3/4</u>               |
|                    | <b>FLOAT EQUIPMENT</b>             |
|                    | Guide Shoe                         |
|                    | Centralizer                        |
|                    | Baskets                            |
|                    | AFU inserts                        |
|                    | Float Shoe                         |
|                    | Latch Down                         |
|                    | Rubber Plug-1                      |
|                    | Pumptrk Charge <u>Long Surface</u> |
|                    | Mileage <u>32</u>                  |

Cement

Circulated!!

Quality Oilwell Cementing

X Signature [Signature]

|              |  |
|--------------|--|
| Tax          |  |
| Discount     |  |
| Total Charge |  |

**JOB LOG**

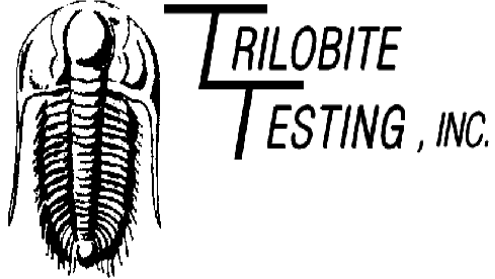
**SWIFT Services, Inc.**

DATE 11-8-13 PAGE NO.

CUSTOMER Downing Nelson WELL NO. 1-7 LEASE Granung Charlots A JOB TYPE 5 1/2 Two Stage TICKET NO. 25232

| CHART NO.    | TIME                               | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS |   | PRESSURE (PSI) |            | DESCRIPTION OF OPERATION AND MATERIALS     |
|--------------|------------------------------------|------------|--------------------|-------|---|----------------|------------|--|
|              |                                    |            |                    | T     | C | TUBING         | CASING     |  |
|              | 2130                               |            |                    |       |   |                |            | on location                                |
|              |                                    |            |                    |       |   |                |            | TD 3547 55 18                              |
|              |                                    |            |                    |       |   |                |            | TP 3547 Insert 3529                        |
|              |                                    |            |                    |       |   |                |            | DV 1139 run 59 5 1/2 x 14"                 |
|              |                                    |            |                    |       |   |                |            | Centralizers 1, 3, 5, 7, 9, 11, 13, 58     |
|              |                                    |            |                    |       |   |                |            | Baskets 2, 59                              |
|              | 2245                               |            |                    |       |   |                |            | Start Pipe                                 |
|              | 0000                               |            |                    |       |   |                |            | Drop Ball Break Circulation                |
|              | 0045                               | 5          | 12                 |       | ✓ |                | 300        | Start Mud Flush                            |
|              |                                    | 5          | 20                 |       | ✓ |                | 300        | Start KLL Flush                            |
|              | 0050                               | 5          | 36                 |       | ✓ |                | 200        | Start Cement                               |
|              | 0108                               |            |                    |       |   |                |            | Drop Plug wash out Pump + Lines            |
|              | 0105                               | 6          |                    |       | ✓ |                |            | Start Displacement                         |
|              |                                    | 6          | 66                 |       | ✓ |                |            | Start KLL                                  |
|              | 0130                               |            | 86.1               |       | ✓ |                | 600 / 1520 | land Plug                                  |
|              |                                    |            |                    |       |   |                |            | Release Dry                                |
|              |                                    |            |                    |       | ✓ |                |            | Drop opening Plug                          |
|              | 0130                               |            | 75                 |       |   |                |            | Plug AH 30 sks MH 15 sks                   |
|              |                                    |            |                    |       | ✓ |                |            | open DV                                    |
|              | 0135                               | 5          | 75                 |       | ✓ |                | 200        | Start Cement                               |
| 0200<br>0330 | <del>0200</del><br><del>0330</del> |            |                    |       |   |                |            | Far Belt broke Great Belt Ann. 34 cement   |
|              | 0350                               |            |                    |       |   |                |            | Drop Plug <del>wash out Pump + Lines</del> |
|              | 0350                               |            |                    |       |   |                |            | Start Displacement                         |
|              |                                    |            | 14                 |       |   |                |            | Circulate Cement                           |
|              | 0400                               |            | 27.8               |       | ✓ |                | 300 / 1520 | land Plug close DV                         |
|              |                                    |            |                    |       |   |                |            | Release Dry Circulate 25 sks to pit        |
|              |                                    |            |                    |       |   |                |            | wash up back up                            |
|              | 0500                               |            |                    |       |   |                |            | Job Complete                               |
|              |                                    |            |                    |       |   |                |            | Thank You                                  |

Josh, Brian, Rob



## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

**7-10s-16w Rooks,KS**

**Ganoung-Charolais A #1-7**

Start Date: 2013.11.05 @ 17:55:42

End Date: 2013.11.05 @ 23:02:51

Job Ticket #: 54364                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.08 @ 08:24:17





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54364

**DST#: 1**

Test Start: 2013.11.05 @ 17:55:42

## GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:13:07

Time Test Ended: 23:02:51

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

**Interval: 3001.00 ft (KB) To 3045.00 ft (KB) (TVD)**

Reference Elevations: 1947.00 ft (KB)

Total Depth: 3045.00 ft (KB) (TVD)

1939.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8369 Inside**

Press @ Run Depth: 53.56 psig @ 3009.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.05 End Date: 2013.11.05

Last Calib.: 2013.11.05

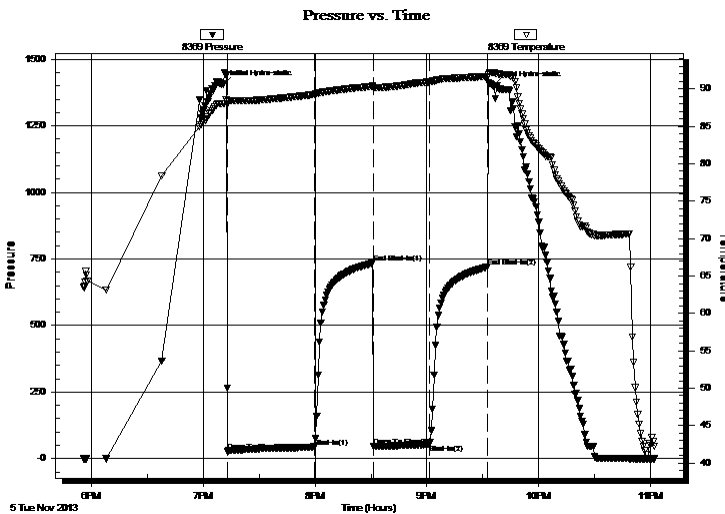
Start Time: 17:55:42 End Time: 23:02:51

Time On Btm: 2013.11.05 @ 19:10:37

Time Off Btm: 2013.11.05 @ 21:35:52

**TEST COMMENT:** 45-IFP-w k bl thru-out 1/2" to 3 1/4" bl  
30-ISIP-no bl  
30-FFP-w k bl 1/4" bl  
30-FSIP-no bl

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1406.06         | 88.00        | Initial Hydro-static |
| 3           | 28.48           | 88.27        | Open To Flow (1)     |
| 49          | 44.00           | 89.25        | Shut-In(1)           |
| 81          | 734.16          | 90.36        | End Shut-In(1)       |
| 81          | 45.25           | 90.15        | Open To Flow (2)     |
| 111         | 53.56           | 90.93        | Shut-In(2)           |
| 142         | 719.26          | 91.67        | End Shut-In(2)       |
| 146         | 1399.61         | 92.16        | Final Hydro-static   |

## Recovery

| Length (ft) | Description                | Volume (bbl) |
|-------------|----------------------------|--------------|
| 110.00      | MW 45%M55%W w /show of oil | 1.27         |
|             |                            |              |
|             |                            |              |
|             |                            |              |
|             |                            |              |

## Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
|                |                 |                  |





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54364

**DST#: 1**

Test Start: 2013.11.05 @ 17:55:42

## Tool Information

|                           |                    |                       |                                |                        |             |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:               | Length: 2960.00 ft | Diameter: 3.80 inches | Volume: 41.52 bbl              | Tool Weight:           | 2200.00 lb  |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer:  | 25000.00 lb |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose:  | 50000.00 lb |
|                           |                    |                       | <u>Total Volume: 41.67 bbl</u> | Tool Chased            | 6.00 ft     |
| Drill Pipe Above KB:      | 10.00 ft           |                       |                                | String Weight: Initial | 35000.00 lb |
| Depth to Top Packer:      | 3001.00 ft         |                       |                                | Final                  | 35000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                                |                        |             |
| Interval between Packers: | 44.00 ft           |                       |                                |                        |             |
| Tool Length:              | 65.00 ft           |                       |                                |                        |             |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                        |             |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00  |      |         | 2981.00 |                               |
| Shut In Tool    | 5.00  |      |         | 2986.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 2991.00 |                               |
| Packer          | 5.00  |      |         | 2996.00 | 21.00 Bottom Of Top Packer    |
| Packer          | 5.00  |      |         | 3001.00 |                               |
| Stubb           | 1.00  |      |         | 3002.00 |                               |
| Perforations    | 7.00  |      |         | 3009.00 |                               |
| Recorder        | 0.00  | 8369 | Inside  | 3009.00 |                               |
| Recorder        | 0.00  | 8700 | Outside | 3009.00 |                               |
| Blank Spacing   | 33.00 |      |         | 3042.00 |                               |
| Bullnose        | 3.00  |      |         | 3045.00 | 44.00 Bottom Packers & Anchor |

**Total Tool Length: 65.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

Job Ticket: 54364

**DST#: 1**

ATTN: Ron Nelson

Test Start: 2013.11.05 @ 17:55:42

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

65000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.92 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description               | Volume<br>bbbl |
|--------------|---------------------------|----------------|
| 110.00       | MW 45%M55%W w/show of oil | 1.270          |

Total Length: 110.00 ft      Total Volume: 1.270 bbl

Num Fluid Samples: 0

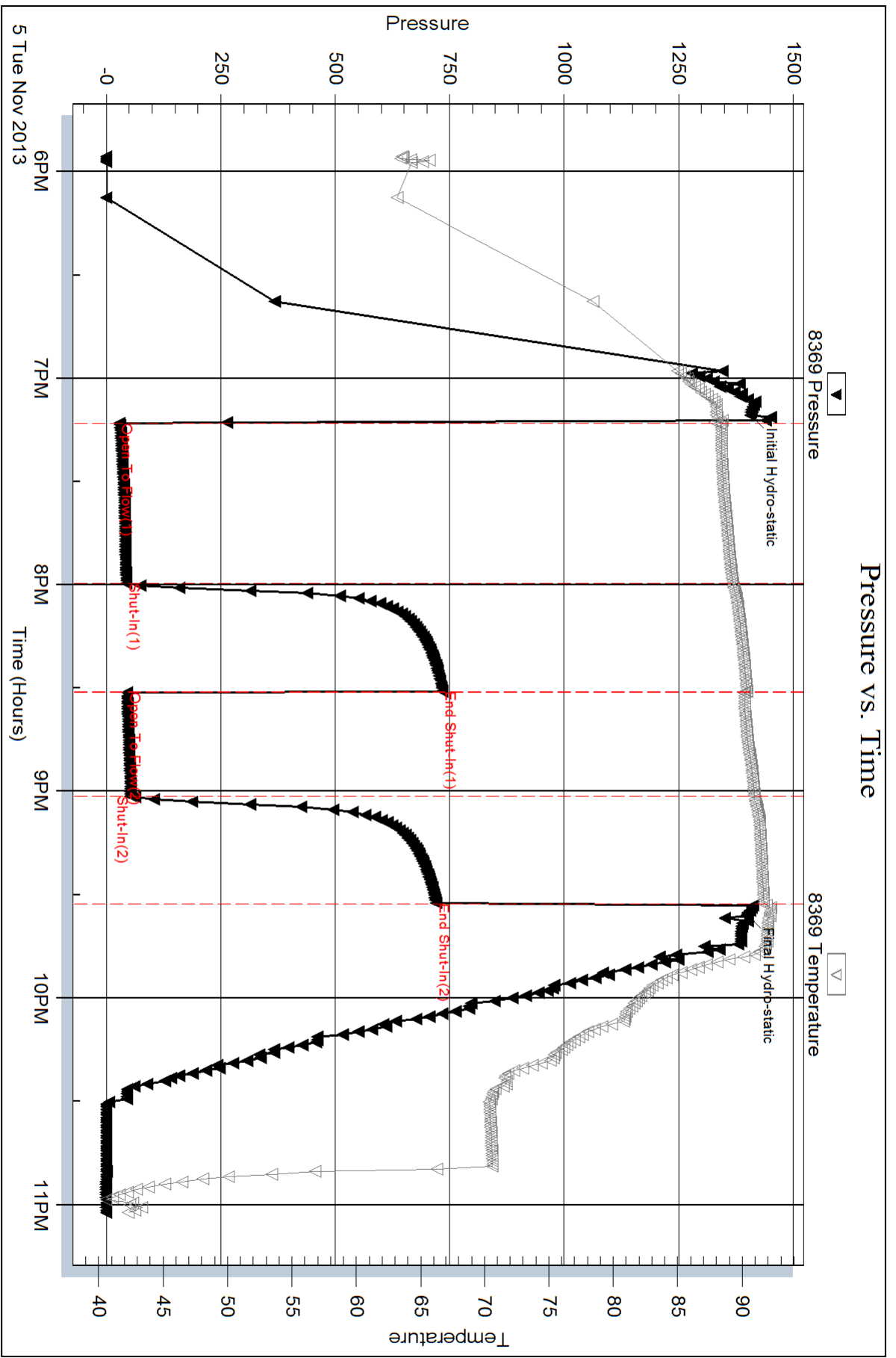
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .16 @ 50F

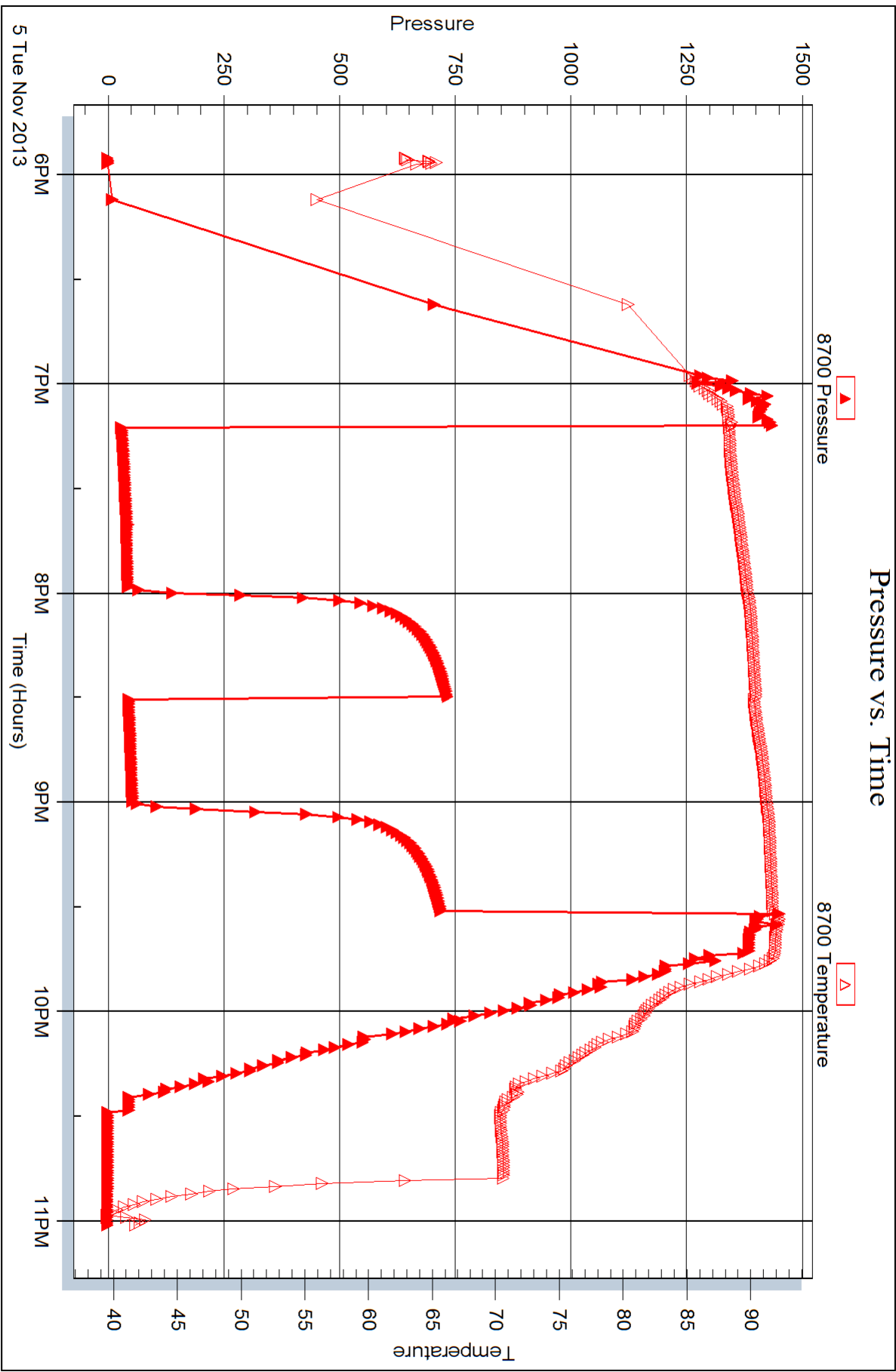


Serial #: 8700

Outside Dow nting-Nelson Oil Co Inc

7-105-16w Rooks,KS

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

**7-10s-16w Rooks,KS**

**Ganoung-Charolais A #1-7**

Start Date: 2013.11.06 @ 10:05:40

End Date: 2013.11.06 @ 15:55:49

Job Ticket #: 54365                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.08 @ 08:20:32



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54365

**DST#: 2**

Test Start: 2013.11.06 @ 10:05:40

## GENERAL INFORMATION:

Formation: **Toronto-LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:11:35

Time Test Ended: 15:55:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

**Interval: 3067.00 ft (KB) To 3190.00 ft (KB) (TVD)**

Reference Elevations: 1947.00 ft (KB)

Total Depth: 3190.00 ft (KB) (TVD)

1939.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @ Run Depth: 125.54 psig @ 3071.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.06

End Date:

2013.11.06

Last Calib.:

2013.11.06

Start Time: 10:05:40

End Time:

15:55:49

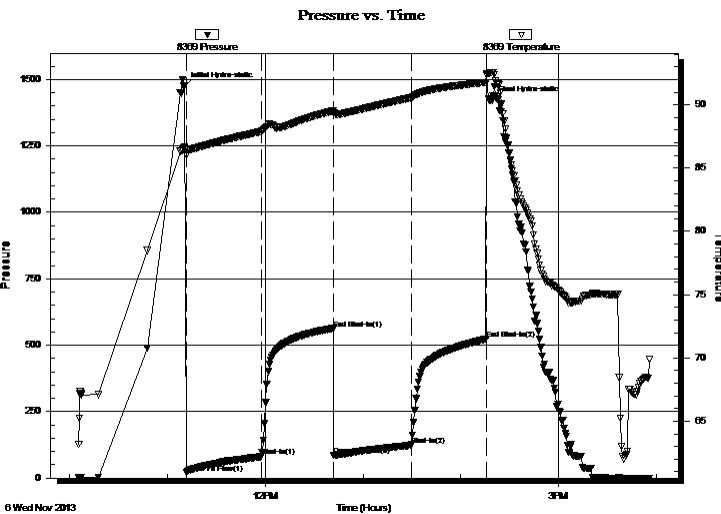
Time On Btm:

2013.11.06 @ 11:10:35

Time Off Btm:

2013.11.06 @ 14:18:35

**TEST COMMENT:** 45-IFP-w k to a gd bl 1/2" to 8 1/2" bl  
45-ISIP-surface bl bk  
45-FFP-w k to a gd bl 1/2" to 6" bl  
45-FSIP-surface bl bk



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1471.71         | 86.66        | Initial Hydro-static |
| 1           | 19.83           | 86.02        | Open To Flow (1)     |
| 47          | 80.81           | 87.90        | Shut-In(1)           |
| 92          | 559.66          | 89.52        | End Shut-In(1)       |
| 92          | 85.29           | 89.35        | Open To Flow (2)     |
| 139         | 125.54          | 90.57        | Shut-In(2)           |
| 185         | 523.34          | 91.77        | End Shut-In(2)       |
| 188         | 1419.37         | 92.54        | Final Hydro-static   |

## Recovery

| Length (ft) | Description            | Volume (bbl) |
|-------------|------------------------|--------------|
| 70.00       | GIP                    | 0.71         |
| 120.00      | SO&GCMW 5%G2%O30%M63%W | 1.68         |
| 60.00       | O&GCM 10%G10%O80%M     | 0.84         |
| 50.00       | O&GCM 10%G20%O70%M     | 0.70         |
|             |                        |              |
|             |                        |              |

\* Recovery from multiple tests

## Gas Rates

|  | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
|  |                |                 |                  |







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

Job Ticket: 54365

**DST#: 2**

ATTN: Ron Nelson

Test Start: 2013.11.06 @ 10:05:40

## Tool Information

|                            |                    |                       |                                |                                    |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:                | Length: 3022.00 ft | Diameter: 3.80 inches | Volume: 42.39 bbl              | Tool Weight: 2200.00 lb            |
| Heavy Wt. Pipe:            | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 25000.00 lb  |
| Drill Collar:              | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose: 50000.00 lb  |
|                            |                    |                       | <u>Total Volume: 42.54 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:       | 6.00 ft            |                       |                                | String Weight: Initial 40000.00 lb |
| Depth to Top Packer:       | 3067.00 ft         |                       |                                | Final 41000.00 lb                  |
| Depth to Bottom Packer:    | ft                 |                       |                                |                                    |
| Interval betw een Packers: | 123.00 ft          |                       |                                |                                    |
| Tool Length:               | 144.00 ft          |                       |                                |                                    |
| Number of Packers:         | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

|                 |       |      |         |         |                                |
|-----------------|-------|------|---------|---------|--------------------------------|
| Change Over Sub | 1.00  |      |         | 3047.00 |                                |
| Shut In Tool    | 5.00  |      |         | 3052.00 |                                |
| Hydraulic tool  | 5.00  |      |         | 3057.00 |                                |
| Packer          | 5.00  |      |         | 3062.00 | 21.00 Bottom Of Top Packer     |
| Packer          | 5.00  |      |         | 3067.00 |                                |
| Stubb           | 1.00  |      |         | 3068.00 |                                |
| Perforations    | 3.00  |      |         | 3071.00 |                                |
| Recorder        | 0.00  | 8369 | Inside  | 3071.00 |                                |
| Recorder        | 0.00  | 8700 | Outside | 3071.00 |                                |
| Blank Spacing   | 97.00 |      |         | 3168.00 |                                |
| Perforations    | 19.00 |      |         | 3187.00 |                                |
| Bullnose        | 3.00  |      |         | 3190.00 | 123.00 Bottom Packers & Anchor |

**Total Tool Length: 144.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

Job Ticket: 54365      **DST#: 2**

ATTN: Ron Nelson

Test Start: 2013.11.06 @ 10:05:40

## Mud and Cushion Information

|                                  |                            |                 |           |
|----------------------------------|----------------------------|-----------------|-----------|
| Mud Type: Gel Chem               | Cushion Type:              | Oil API:        | deg API   |
| Mud Weight: 9.00 lb/gal          | Cushion Length: ft         | Water Salinity: | 55000 ppm |
| Viscosity: 50.00 sec/qt          | Cushion Volume: bbl        |                 |           |
| Water Loss: 7.92 in <sup>3</sup> | Gas Cushion Type:          |                 |           |
| Resistivity: ohm.m               | Gas Cushion Pressure: psig |                 |           |
| Salinity: 2000.00 ppm            |                            |                 |           |
| Filter Cake: 1.00 inches         |                            |                 |           |

## Recovery Information

Recovery Table

| Length<br>ft | Description            | Volume<br>bbl |
|--------------|------------------------|---------------|
| 70.00        | GIP                    | 0.709         |
| 120.00       | SO&GCMW 5%G2%O30%M63%W | 1.683         |
| 60.00        | O&GCM 10%G10%O80%M     | 0.842         |
| 50.00        | O&GCM 10%G20%O70%M     | 0.701         |

Total Length: 300.00 ft      Total Volume: 3.935 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW .17 @ 70F

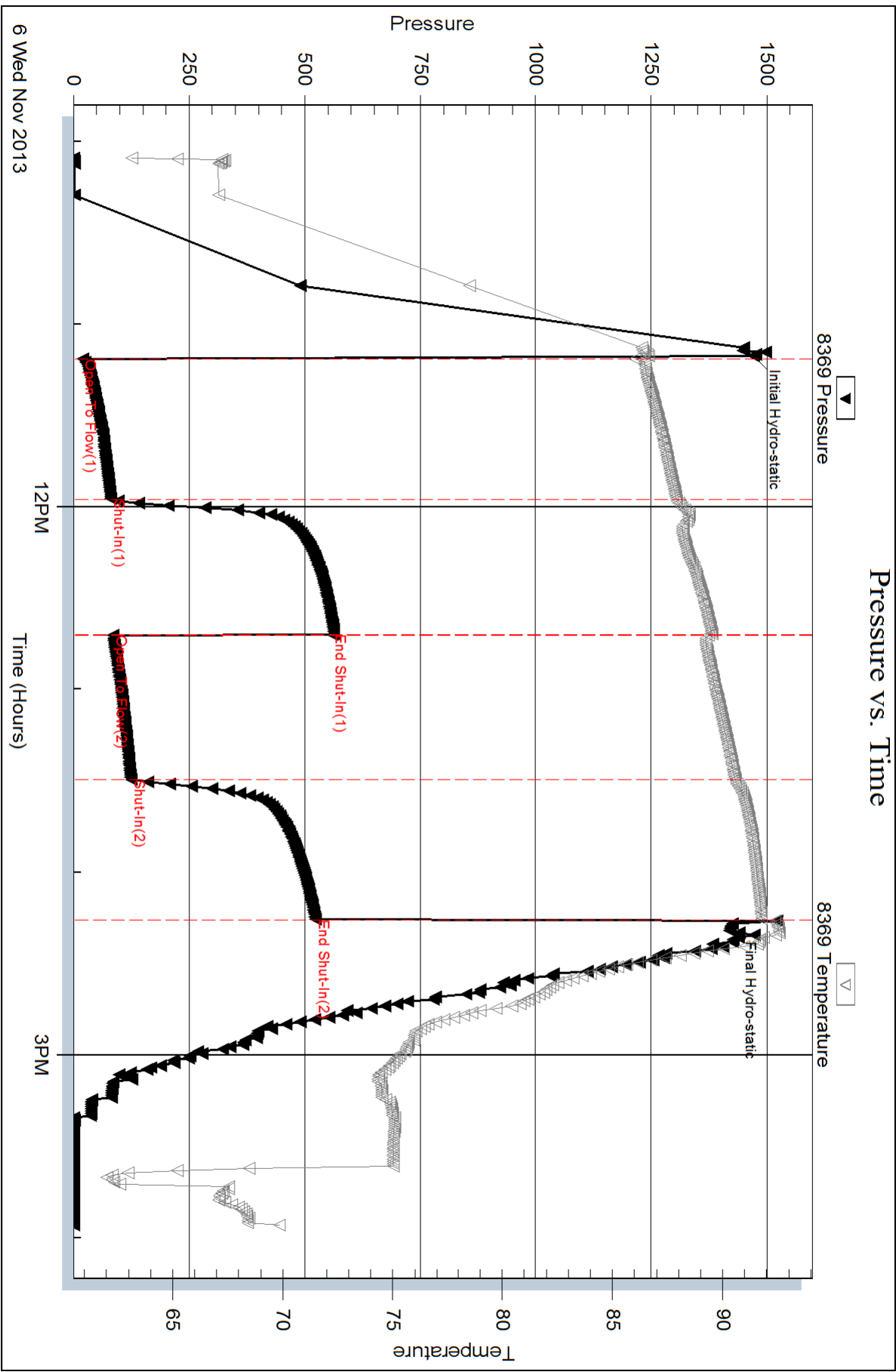
Serial #: 8369

Inside

Doming-Nelson Oil Co Inc

7-10s-16w Rooks, KS

DST Test Number: 2



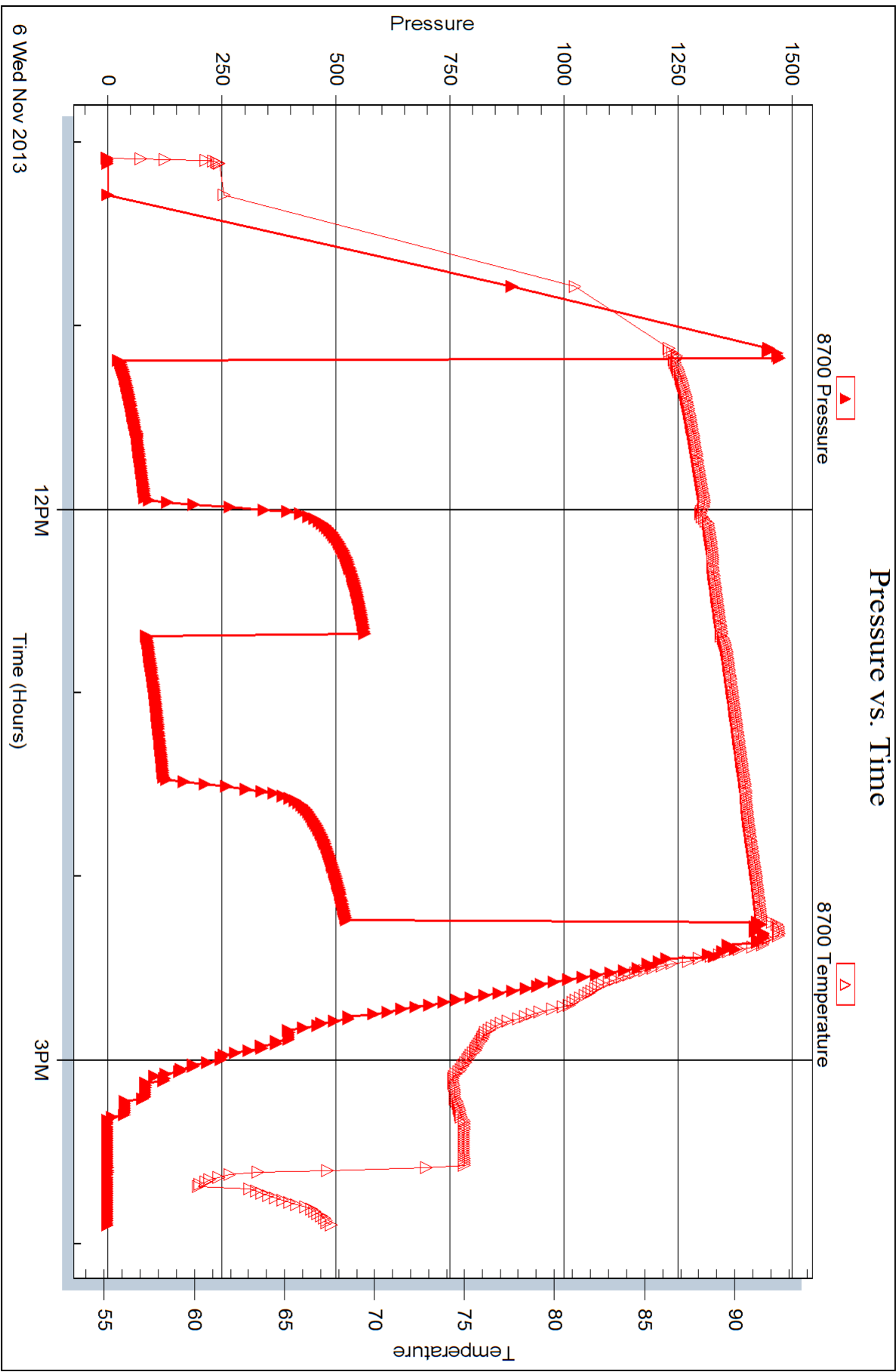
Serial #: 8700

Outside

Dow nting-Nelson Oil Co Inc

7-10s-16w Rooks, KS

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

**7-10s-16w Rooks,KS**

**Ganoung-Charolais A #1-7**

Start Date: 2013.11.07 @ 00:05:27

End Date: 2013.11.07 @ 06:03:21

Job Ticket #: 54366                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.08 @ 08:19:53

Downing-Nelson Oil Co Inc

Ganoung-Charolais A #1-7

7-10s-16w Rooks,KS

DST # 3

LKC E-F

2013.11.07



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54366

**DST#: 3**

Test Start: 2013.11.07 @ 00:05:27

## GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:30:07

Time Test Ended: 06:03:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

**Interval: 3180.00 ft (KB) To 3229.00 ft (KB) (TVD)**

Reference Elevations: 1947.00 ft (KB)

Total Depth: 3229.00 ft (KB) (TVD)

1939.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @RunDepth: 63.38 psig @ 3193.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.07

End Date:

2013.11.07

Last Calib.:

2013.11.07

Start Time: 00:05:27

End Time:

06:03:21

Time On Btm:

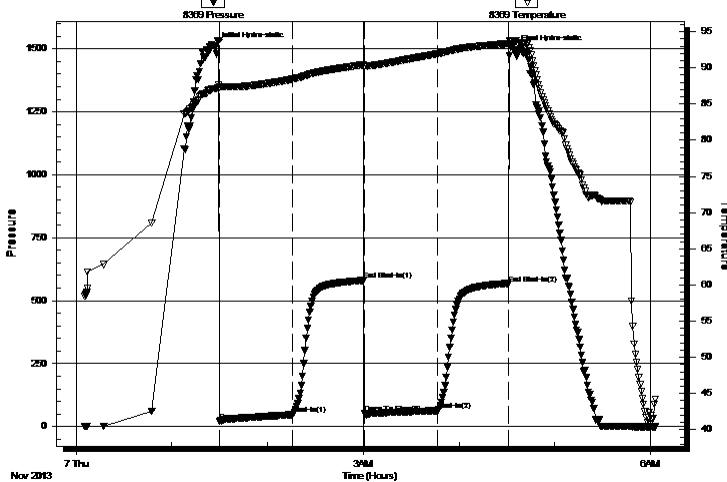
2013.11.07 @ 01:27:22

Time Off Btm:

2013.11.07 @ 04:34:36

**TEST COMMENT:** 45-IFP-w k to a gd bl 1/2" to 6" bl  
45-ISIP-no bl  
45-FP-w k bl thru-out 1/4" to 2 1/2" bl  
45-FSIP-no bl

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1507.65         | 87.12        | Initial Hydro-static |
| 3           | 20.93           | 87.33        | Open To Flow (1)     |
| 49          | 47.63           | 88.44        | Shut-In(1)           |
| 93          | 580.54          | 90.43        | End Shut-In(1)       |
| 94          | 54.13           | 90.26        | Open To Flow (2)     |
| 140         | 63.38           | 91.95        | Shut-In(2)           |
| 184         | 567.51          | 93.35        | End Shut-In(2)       |
| 188         | 1495.68         | 93.79        | Final Hydro-static   |

Recovery

| Length (ft) | Description             | Volume (bbl) |
|-------------|-------------------------|--------------|
| 0.00        | 255'GIP                 | 0.00         |
| 60.00       | GM&WCO 25%G10%M20%W45%O | 0.57         |
| 45.00       | GMO 15'G40%M45%O        | 0.63         |
|             |                         |              |
|             |                         |              |

Gas Rates

|  | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
|  |                |                 |                  |

\* Recovery from multiple tests







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54366

**DST#: 3**

Test Start: 2013.11.07 @ 00:05:27

## Tool Information

|                           |                    |                       |                                |                        |             |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe:               | Length: 3150.00 ft | Diameter: 3.80 inches | Volume: 44.19 bbl              | Tool Weight:           | 2200.00 lb  |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer:  | 25000.00 lb |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose:  | 55000.00 lb |
|                           |                    |                       | <u>Total Volume: 44.34 bbl</u> | Tool Chased            | 0.00 ft     |
| Drill Pipe Above KB:      | 21.00 ft           |                       |                                | String Weight: Initial | 40000.00 lb |
| Depth to Top Packer:      | 3180.00 ft         |                       |                                | Final                  | 41000.00 lb |
| Depth to Bottom Packer:   | ft                 |                       |                                |                        |             |
| Interval between Packers: | 49.00 ft           |                       |                                |                        |             |
| Tool Length:              | 70.00 ft           |                       |                                |                        |             |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                        |             |
| Tool Comments:            |                    |                       |                                |                        |             |

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00  |      |         | 3160.00 |                               |
| Shut In Tool    | 5.00  |      |         | 3165.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 3170.00 |                               |
| Packer          | 5.00  |      |         | 3175.00 | 21.00 Bottom Of Top Packer    |
| Packer          | 5.00  |      |         | 3180.00 |                               |
| Stubb           | 1.00  |      |         | 3181.00 |                               |
| Perforations    | 12.00 |      |         | 3193.00 |                               |
| Recorder        | 0.00  | 8369 | Inside  | 3193.00 |                               |
| Recorder        | 0.00  | 8700 | Outside | 3193.00 |                               |
| Blank Spacing   | 33.00 |      |         | 3226.00 |                               |
| Bullnose        | 3.00  |      |         | 3229.00 | 49.00 Bottom Packers & Anchor |

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

Job Ticket: 54366

**DST#: 3**

ATTN: Ron Nelson

Test Start: 2013.11.07 @ 00:05:27

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description             | Volume<br>bbbl |
|--------------|-------------------------|----------------|
| 0.00         | 255'GIP                 | 0.000          |
| 60.00        | GM&WCO 25%G10%M20%W45%O | 0.568          |
| 45.00        | GMO 15'G40%M45%O        | 0.631          |

Total Length: 105.00 ft

Total Volume: 1.199 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

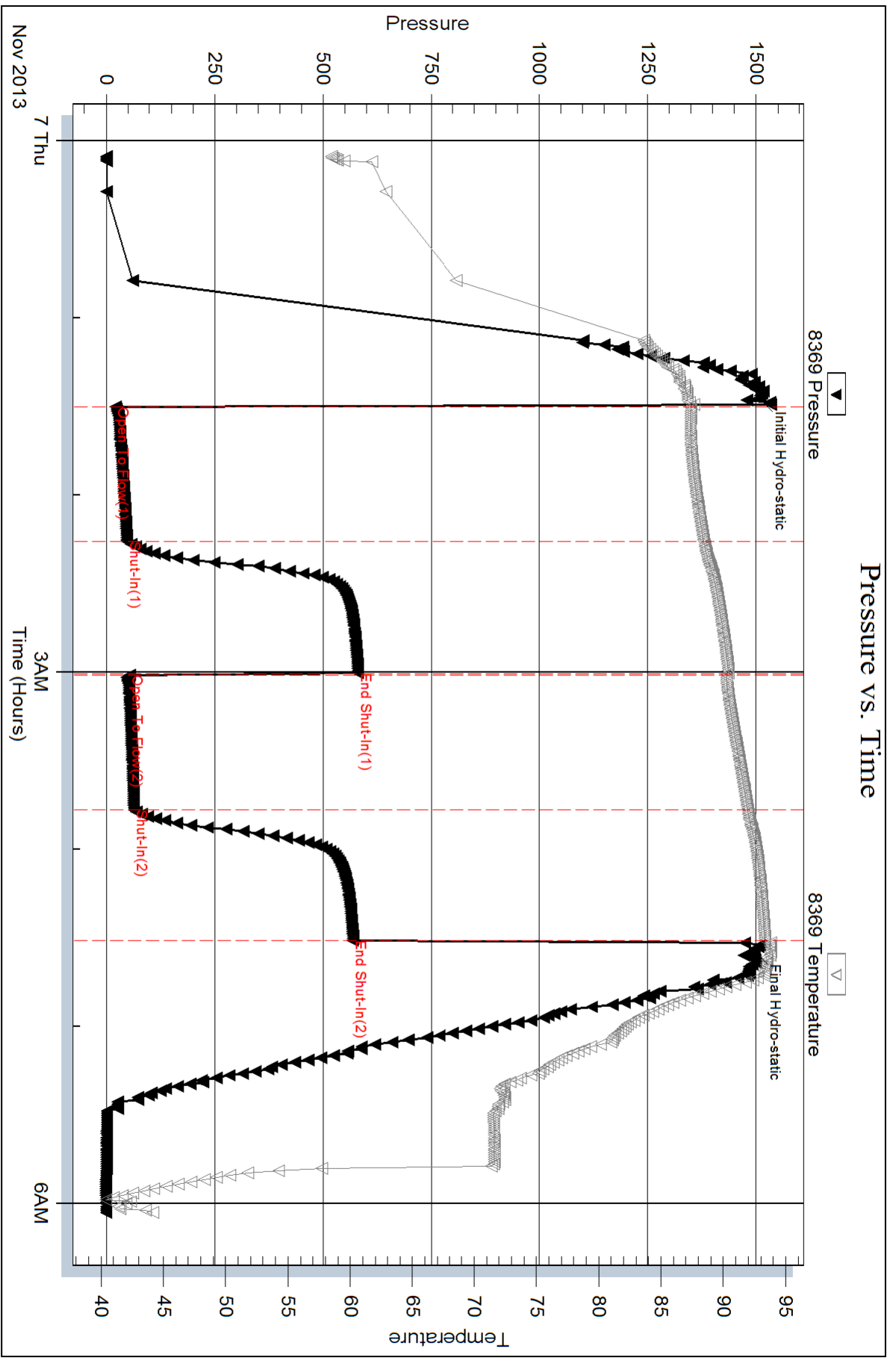
Serial #: 8369

Inside

Dow n/n-g-Nelson Oil Co Inc

7-10s-16w Rooks, KS

DST Test Number: 3

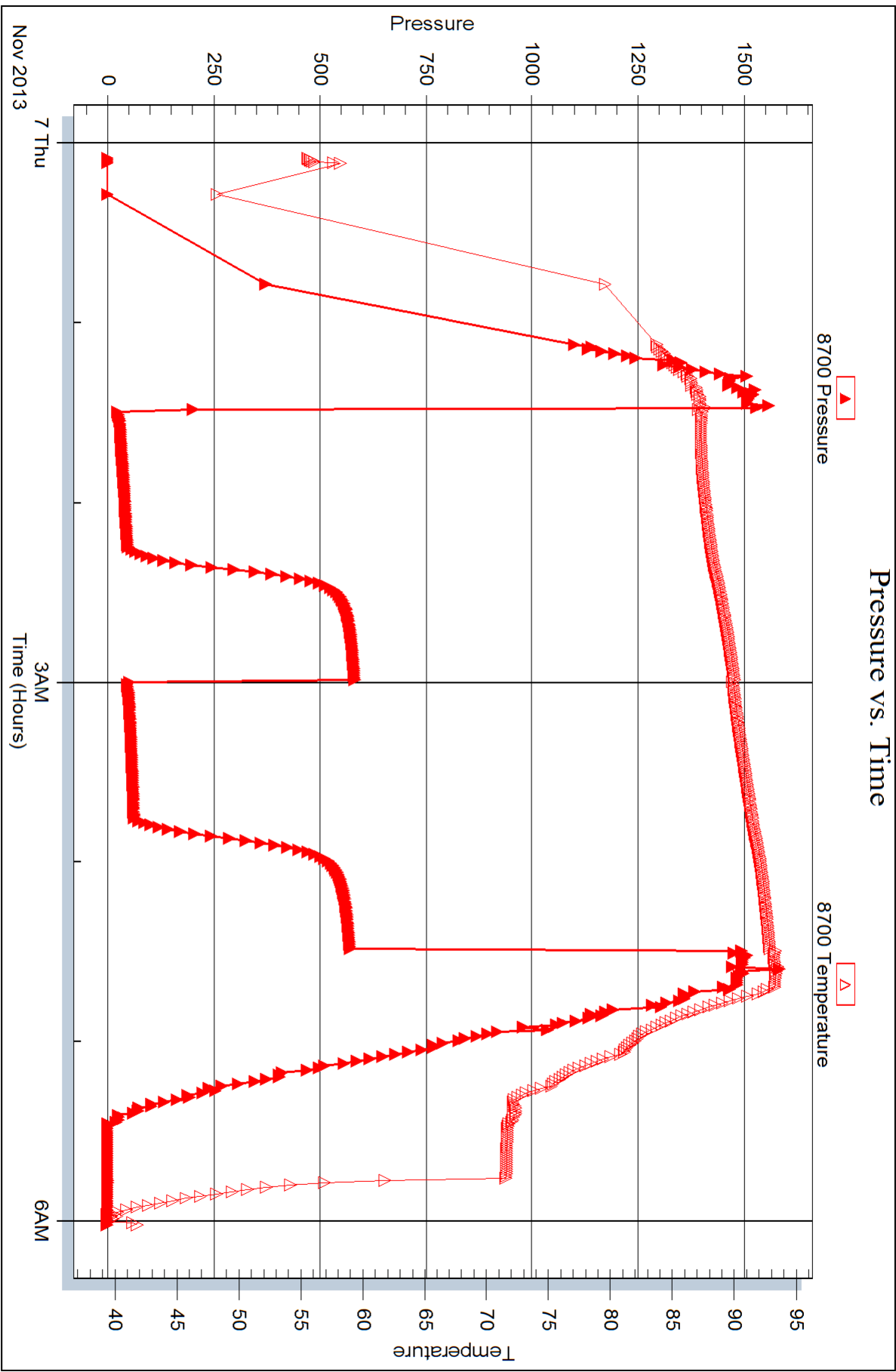


Serial #: 8700

Outside Dow nting-Nelson Oil Co Inc

7-105-16w Rooks, KS

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54366

Printed: 2013.11.08 @ 08:19:55



## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019  
Hays KS 67601

ATTN: Ron Nelson

**7-10s-16w Rooks,KS**

**Ganoung-Charolais A #1-7**

Start Date: 2013.11.07 @ 14:40:28

End Date: 2013.11.07 @ 19:30:37

Job Ticket #: 54367                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.08 @ 08:19:12

Downing-Nelson Oil Co Inc

Ganoung-Charolais A #1-7

7-10s-16w Rooks,KS

DST # 4

LKC H-J

2013.11.07



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54367

**DST#: 4**

Test Start: 2013.11.07 @ 14:40:28

## GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:53:38

Time Test Ended: 19:30:37

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

**Interval: 3261.00 ft (KB) To 3314.00 ft (KB) (TVD)**

Reference Elevations: 1947.00 ft (KB)

Total Depth: 3314.00 ft (KB) (TVD)

1939.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @RunDepth: 25.99 psig @ 3263.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.07

End Date:

2013.11.07

Last Calib.:

2013.11.07

Start Time:

14:40:28

End Time:

19:30:37

Time On Btm:

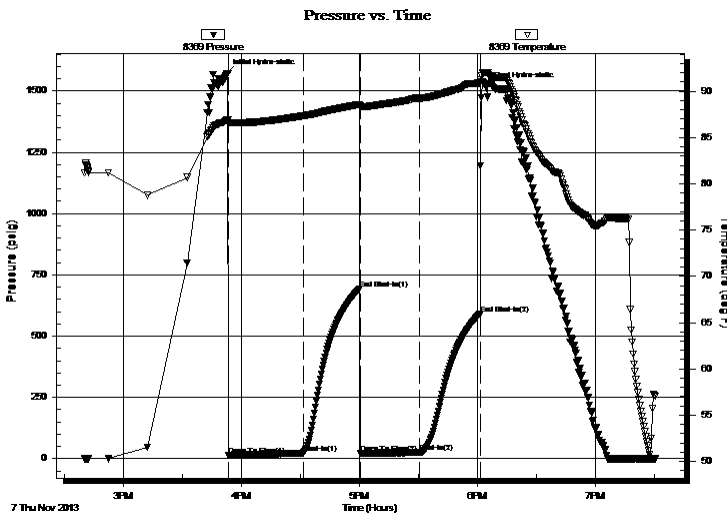
2013.11.07 @ 15:52:38

Time Off Btm:

2013.11.07 @ 18:04:38

**TEST COMMENT:** 30-IFP-surface bl thru-out  
30-ISIP-no bl  
30-FFP-surface bl thru-out  
30-FSIP-no bl

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1569.62         | 86.89        | Initial Hydro-static |
| 1           | 14.25           | 86.56        | Open To Flow (1)     |
| 39          | 22.72           | 87.34        | Shut-In(1)           |
| 68          | 693.14          | 88.58        | End Shut-In(1)       |
| 68          | 23.06           | 88.38        | Open To Flow (2)     |
| 98          | 25.99           | 89.27        | Shut-In(2)           |
| 129         | 591.66          | 90.90        | End Shut-In(2)       |
| 132         | 1516.60         | 92.04        | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 20.00       | mud         | 0.10         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
|                |                 |                  |

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

ATTN: Ron Nelson

Job Ticket: 54367

**DST#: 4**

Test Start: 2013.11.07 @ 14:40:28

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3215.00 ft | Diameter: 3.80 inches | Volume: 45.10 bbl              | Tool Weight: 2200.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 25000.00 lb  |
| Drill Collar:             | Length: 30.00 ft   | Diameter: 2.25 inches | Volume: 0.15 bbl               | Weight to Pull Loose: 50000.00 lb  |
|                           |                    |                       | <u>Total Volume: 45.25 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 5.00 ft            |                       |                                | String Weight: Initial 40000.00 lb |
| Depth to Top Packer:      | 3261.00 ft         |                       |                                | Final 40000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 53.00 ft           |                       |                                |                                    |
| Tool Length:              | 74.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 3241.00    |                               |
| Shut In Tool     | 5.00        |            |          | 3246.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 3251.00    |                               |
| Packer           | 5.00        |            |          | 3256.00    | 21.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 3261.00    |                               |
| Stubb            | 1.00        |            |          | 3262.00    |                               |
| Perforations     | 1.00        |            |          | 3263.00    |                               |
| Recorder         | 0.00        | 8369       | Inside   | 3263.00    |                               |
| Recorder         | 0.00        | 8700       | Outside  | 3263.00    |                               |
| Blank Spacing    | 33.00       |            |          | 3296.00    |                               |
| Perforations     | 15.00       |            |          | 3311.00    |                               |
| Bullnose         | 3.00        |            |          | 3314.00    | 53.00 Bottom Packers & Anchor |

**Total Tool Length: 74.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Co Inc

**Ganoung-Charolais A #1-7**

PO Box 1019  
Hays KS 67601

**7-10s-16w Rooks,KS**

Job Ticket: 54367

**DST#: 4**

ATTN: Ron Nelson

Test Start: 2013.11.07 @ 14:40:28

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 20.00        | mud         | 0.098         |

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8369

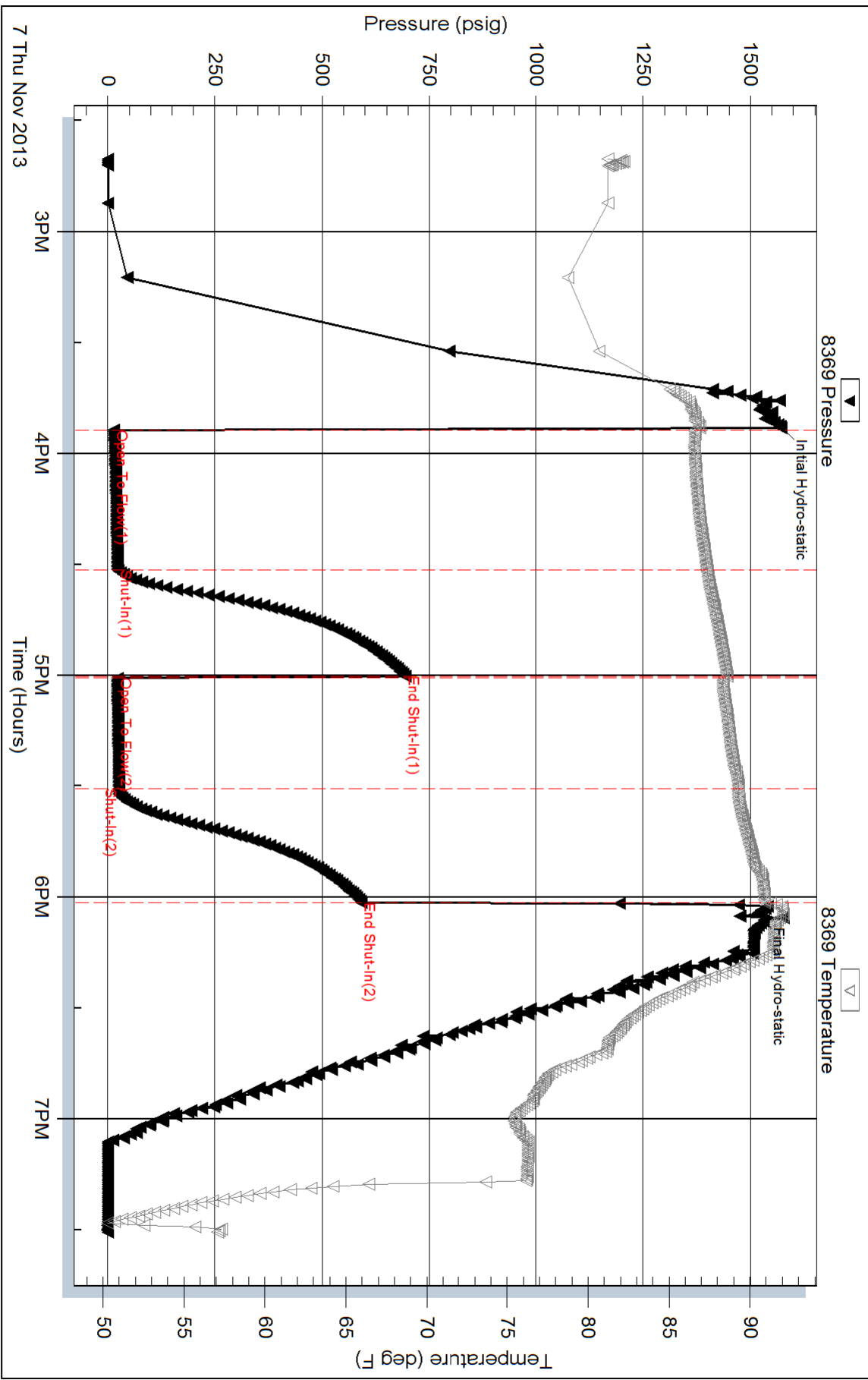
Inside

Dow niny-Nelson Oil Co Inc

7-10s-16w Rooks,KS

DST Test Number: 4

### Pressure vs. Time

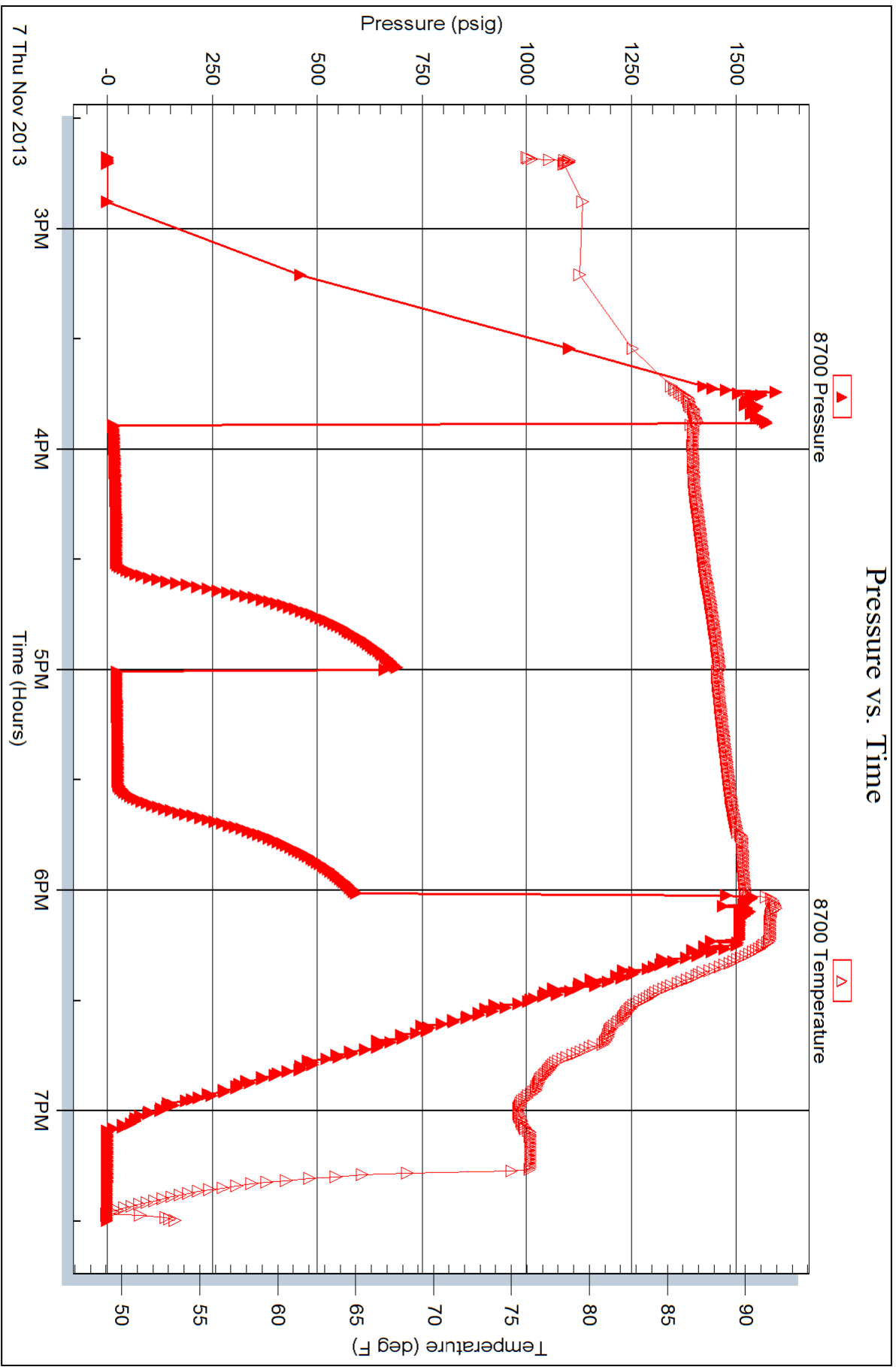


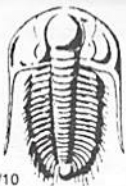
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Outside Dow nting-Nelson Oil Co Inc

7-10s-16w Rooks, KS

DST Test Number: 4





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54364

Well Name & No. Ganoung-Cholaris "A" #1-7 Test No. 1 Date 11-5-13  
 Company Downing-Nelson Oil Co Inc Elevation 1947 KB 1939 GL  
 Address PO Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. Ron Nelson Rig Discovery rig 1  
 Location: Sec. 7 Twp. 10<sup>s</sup> Rge. 16<sup>w</sup> Co. \_\_\_\_\_ State Ks

Interval Tested 3001-3045 Zone Tested Topeka  
 Anchor Length 44' Drill Pipe Run 2960 Mud Wt. 8.7  
 Top Packer Depth 2996 Drill Collars Run 30 Vis 60  
 Bottom Packer Depth 3001 Wt. Pipe Run - WL 8  
 Total Depth 3045 Chlorides 2000 ppm System LCM 2#

Blow Description IFP - Weak Blow 1/2" To 3/4" Blow  
ISIP - NO Blow  
FFP - Weak Blow 1/4" Blow  
FSIP - NO Blow

| Rec        | Feet of             | %gas | %oil      | %water    | %mud |
|------------|---------------------|------|-----------|-----------|------|
| <u>110</u> | <u>MW</u>           |      | <u>55</u> | <u>45</u> |      |
|            | <u>w/show for 1</u> |      |           |           |      |
|            |                     |      |           |           |      |
|            |                     |      |           |           |      |
|            |                     |      |           |           |      |

Rec Total 110 BHT 91 Gravity - API RW .16 @ 50 °F Chlorides 65000 ppm  
 (A) Initial Hydrostatic 1406  Test 1150 T-On Location 1525  
 (B) First Initial Flow 28  Jars \_\_\_\_\_ T-Started 1755  
 (C) First Final Flow 44  Safety Joint \_\_\_\_\_ T-Open 1915  
 (D) Initial Shut-In 734  Circ Sub \_\_\_\_\_ T-Pulled 2130  
 (E) Second Initial Flow 45  Hourly Standby \_\_\_\_\_ T-Out 2302  
 (F) Second Final Flow 53  Mileage 75 RT 116.25  
 (G) Final Shut-In 719  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1399  Straddle \_\_\_\_\_

Initial Open 45  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  
 Final Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1266.25  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1266.25

Approved By \_\_\_\_\_ Our Representative Ray Schwager **THANK YOU**  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54365

Well Name & No. Ganoung-Cholaris A #1-7 Test No. 2 Date 11-6-13  
 Company Downing-Nelson Oil Co Inc Elevation 1947 KB 1939 GL  
 Address PO Box 1019 Hays, Ko 67601  
 Co. Rep / Geo. Ron Nelson Rig Discovery rig 1  
 Location: Sec. 7 Twp. 10<sup>s</sup> Rge. 16<sup>w</sup> Co. Rooks State Ks

Interval Tested 3067-3190 Zone Tested Toronto-LKC D  
 Anchor Length 123 Drill Pipe Run 3022 Mud Wt. 8.9  
 Top Packer Depth 3062 Drill Collars Run 30 Vis 50  
 Bottom Packer Depth 3067 Wt. Pipe Run - WL 8  
 Total Depth 3190 Chlorides 2000 ppm System LCM 2#

Blow Description IFP - WEAK TO A GOOD BLOW 1/2" TO 8 1/2" BLOW  
ISTP - SURFACE BLOW BACK  
FFP - WEAK TO A GOOD BLOW 1/2" TO 6" BLOW  
FSIP - SURFACE BLOW BACK

| Rec        | Feet of        | %gas      | %oil      | %water    | %mud      |
|------------|----------------|-----------|-----------|-----------|-----------|
| <u>70</u>  | <u>GTP</u>     |           |           |           |           |
| <u>120</u> | <u>50+6CMW</u> | <u>5</u>  | <u>2</u>  | <u>63</u> | <u>30</u> |
| <u>60</u>  | <u>0+6CM</u>   | <u>10</u> | <u>10</u> |           | <u>80</u> |
| <u>50</u>  | <u>0+6CM</u>   | <u>10</u> | <u>20</u> |           | <u>70</u> |

Rec Total 230 BHT 92 Gravity - API RW .17 @ 85 °F Chlorides 55000 ppm

(A) Initial Hydrostatic 1471  Test 1150 T-On Location 0945  
 (B) First Initial Flow 19  Jars T-Started 1005  
 (C) First Final Flow 80  Safety Joint T-Open 1110  
 (D) Initial Shut-In 559  Circ Sub T-Pulled 1410  
 (E) Second Initial Flow 85  Hourly Standby T-Out 1555  
 (F) Second Final Flow 125  Mileage 75RT 116.25  
 (G) Final Shut-In 523  Sampler  
 (H) Final Hydrostatic 1419  Straddle  Ruined Shale Packer

Initial Open 45  Shale Packer  Ruined Packer  
 Initial Shut-In 45  Extra Packer  Extra Copies  
 Final Flow 45  Extra Recorder Sub Total 0  
 Final Shut-In 45  Day Standby Total 1266.25  
 Accessibility MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative RAY SCHWAGER THANK YOU

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54366

Well Name & No. GANOUNG-CHOLARIS 'A' #1-7 Test No. 3 Date 11-6-13  
 Company Downing-Nelson Oil Co Inc Elevation 1947 KB 1939 GL  
 Address PO Box 1019 Hays, Ko 67601  
 Co. Rep / Geo. Ron Nelson Rig Discoveryrig 1  
 Location: Sec. 7 Twp. 10<sup>s</sup> Rge. 16<sup>w</sup> Co. Rooks State Ko

Interval Tested 3180-3229 Zone Tested LKCE-F  
 Anchor Length 49 Drill Pipe Run 3150 Mud Wt. 8.9  
 Top Packer Depth 3175 Drill Collars Run 30 Vis 53  
 Bottom Packer Depth 3180 Wt. Pipe Run - WL 8  
 Total Depth 3229 Chlorides 2000 ppm System LCM 1 1/2 #  
 Blow Description IFP - WEAK TO A GOOD BLOW 1/2" TO 6" BLOW  
ISIP - NO BLOW  
FFP - WEAK BLOW THRU-OUT 1/4" TO 2 1/2" BLOW  
FSIP - NO BLOW

| Rec        | Feet of       | %gas      | %oil      | %water    | %mud      |
|------------|---------------|-----------|-----------|-----------|-----------|
| <u>255</u> | <u>GIP</u>    |           |           |           |           |
| <u>60</u>  | <u>GM+WCO</u> | <u>25</u> | <u>45</u> | <u>20</u> | <u>10</u> |
| <u>45</u>  | <u>GMO</u>    | <u>15</u> | <u>45</u> |           | <u>40</u> |
|            |               |           |           |           |           |
|            |               |           |           |           |           |

Rec Total 105 BHT 93 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1507  Test 1150 T-On Location 2345  
 (B) First Initial Flow 20  Jars - T-Started 0005  
 (C) First Final Flow 47  Safety Joint - T-Open 0130  
 (D) Initial Shut-In 580  Circ Sub - T-Pulled 0430  
 (E) Second Initial Flow 54  Hourly Standby - T-Out 0603  
 (F) Second Final Flow 63  Mileage 75RT 116.25 Comments -  
 (G) Final Shut-In 567  Sampler -  
 (H) Final Hydrostatic 1495  Straddle -  Ruined Shale Packer -  
 Shale Packer -  Ruined Packer -  
 Extra Packer -  Extra Copies -  
 Initial Open 45  Extra Recorder - Sub Total 0  
 Initial Shut-In 45  Day Standby - Total 1266.25  
 Final Flow 45  Accessibility - MP/DST Disc't -  
 Final Shut-In 45 Sub Total 1266.25

Approved By \_\_\_\_\_ Our Representative RAY SCHWAGER *Thank you*

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54367

Well Name & No. GANOUNG-CHOLARIS A#1-7 Test No. 4 Date 11-7-13  
 Company Downing-Nelson O. L. Co. Inc Elevation 1947 KB 1939 GL  
 Address PO Box 1019 Hays, Ko 67601  
 Co. Rep / Geo. Ron Nelson Rig Discovery rig 1  
 Location: Sec. 7 Twp. 10<sup>s</sup> Rge. 16<sup>w</sup> Co. Rooks State Ko

Interval Tested 3261-3314 Zone Tested LKC H-J  
 Anchor Length 53 Drill Pipe Run 3215 Mud Wt. 8.8  
 Top Packer Depth 3256 Drill Collars Run 30 Vis 50  
 Bottom Packer Depth 3261 Wt. Pipe Run - WL 8.8  
 Total Depth 3314 Chlorides 5000 ppm System LCM 1/2#

Blow Description IFF - SURFACE BLOW THRU-OUT  
ISTP - NO BLOW  
FFP - SURFACE BLOW THRU-OUT  
FSTP - NO BLOW

| Rec       | Feet of    | %gas | %oil | %water | %mud |
|-----------|------------|------|------|--------|------|
| <u>20</u> | <u>Mud</u> |      |      |        |      |
|           |            |      |      |        |      |
|           |            |      |      |        |      |
|           |            |      |      |        |      |
|           |            |      |      |        |      |

Rec Total 20 BHT 91 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1569  Test 1150 T-On Location 1420  
 (B) First Initial Flow 14  Jars T-Started 1440  
 (C) First Final Flow 22  Safety Joint T-Open 1555  
 (D) Initial Shut-In 693  Circ Sub T-Pulled 1755  
 (E) Second Initial Flow 23  Hourly Standby T-Out 1930  
 (F) Second Final Flow 25  Mileage 75RT 116.25 Comments  
 (G) Final Shut-In 591  Sampler  
 (H) Final Hydrostatic 1516  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1266.25  
 Accessibility MP/DST Disc't

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Sub Total 1266.25

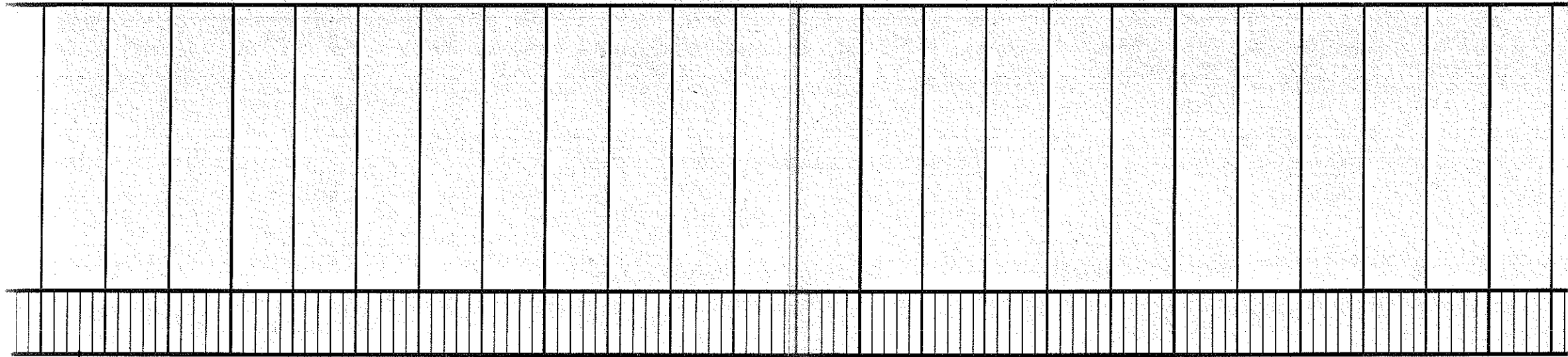
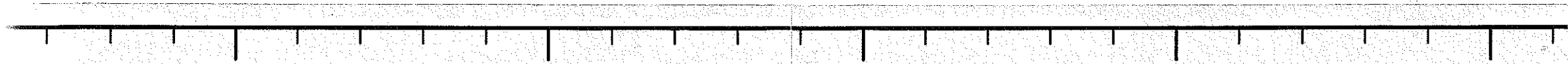
Approved By \_\_\_\_\_ Our Representative RAY SCHWAGER Thank you

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1200

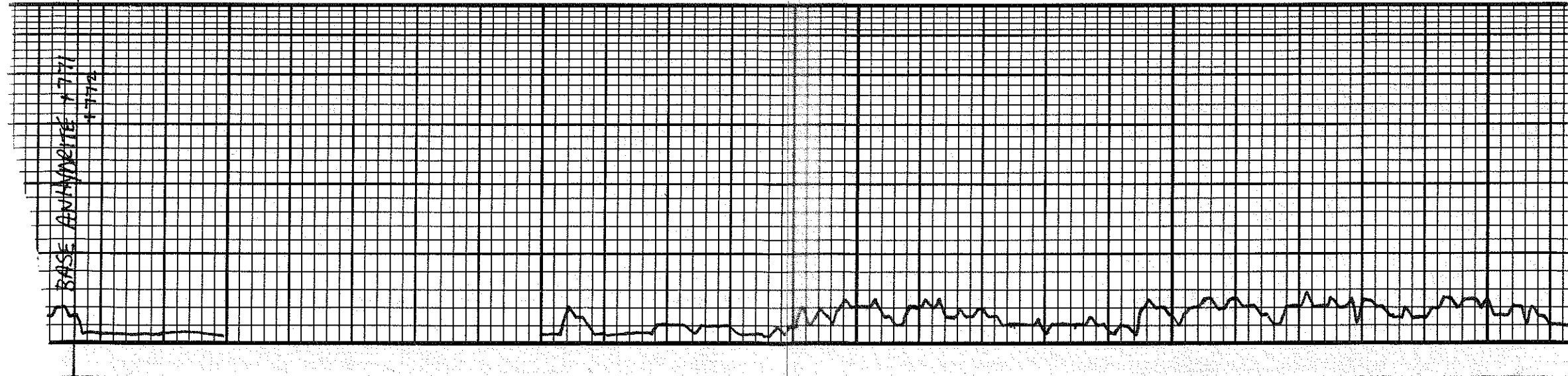
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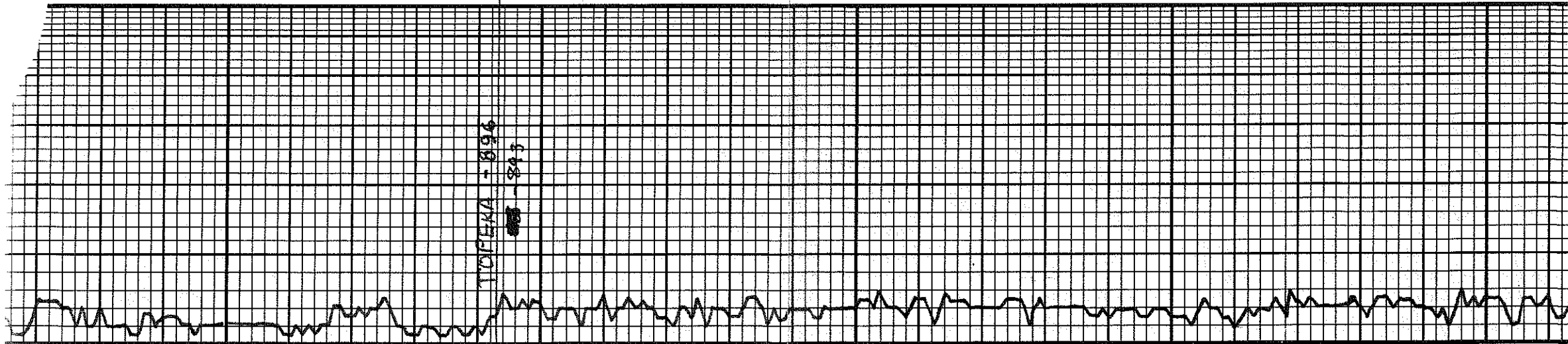
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2700

50

BASE ANHYDRITE 4771  
4772





TOPEKA - 896

893

2800

50

2900

60

3000

ALL sh v. dr. grey - grey

SM v. gummy - sticky

DNS wt - BAN sh. xylol. NS

sh

abn + grey sh

LS wt - m. w. sh. xylol. mod. dr. NS

grey sh

LS wt - m. w. sh. xylol. mod. dr. NS

sh grey

CHKP sh. NS. sm. cl. w. sh. xylol. mod. dr. NS. BAN. sh. xylol. mod. dr. NS. BAN. sh. xylol. mod. dr. NS.

sh. BAN. sh. xylol. mod. dr. NS.

sh. BAN. sh. xylol. mod. dr. NS.

sh. BAN. sh. xylol. mod. dr. NS.

LS wt - m. w. sh. xylol. mod. dr. NS

sh grey

w/ intod. BAN - grey sh

LS wt - mod. dr. BAN. xylol. NS

LS wt - sm. ch. grey in pt

mod. sh. xylol. mod. dr. NS w/ intod. sh

sh. BAN. sh. xylol. mod. dr. NS

DNS. sh. xylol. mod. dr. NS

sh. BAN. sh. xylol. mod. dr. NS

LS wt - m. w. sh. xylol. mod. dr. NS. BAN. sh. xylol. mod. dr. NS. BAN. sh. xylol. mod. dr. NS.

DNS wt - BAN. sh. xylol. mod. dr. NS. BAN. sh. xylol. mod. dr. NS.

var. - sh. xylol. mod. dr. NS

grey sh

DNS wt - m. w. sh. xylol. mod. dr. NS

BLK. BAN. sh. xylol. mod. dr. NS

grey sh

DST #1  
3001-3045  
45" 36"-30"-30"  
1/2" top 3/4"

S







